

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) Method for the simultaneous segmentation of multiple or composed objects in an image, wherein a deformable surface model is to be adapted to a first surface of a first object and a second surface of a second object and wherein the deformable surface model comprises a first partial deformable surface model and a second partial deformable surface model, comprising the steps acts of:

(a) applying the first partial deformable surface model describing a structure of the first surface of the first object;

(b) applying the second partial deformable surface model describing a structure of the second surface of the second object, wherein the first partial deformable surface model and the second partial deformable surface model have a prescribed spatial relationship corresponding to a spatial relationship distances between portions of the first object and portions of the second object; and

(c) adapting the first partial deformable model to the first surface and the second partial deformable model to the second surface, wherein the prescribed spatial relationship of the first partial deformable surface model and the second partial deformable surface model is used for the adaptation.

2. (Original) Method according to claim 1, wherein the spatial relationship of the first partial deformable surface model and the second partial deformable surface model is prescribed by means of an additional edge, which connects a first vertex of the first partial deformable surface model with a second vertex of the second partial deformable surface model.

3. (Original) Method according to claim 2, wherein the additional edge is a featureless vertex connection.

4. (Currently amended) Method according to claim 1, wherein the first and second partial deformable surface models each comprise a mesh with a plurality of surface elements, further comprising the steps of:

detecting feature points for the surface elements at the first

and second surfaces of the first and second objects; and

recalculating coordinates of the surface elements of the mesh to represent the feature points.

5. (Currently amended) Method according to claim 4, wherein the recalculation ~~step act~~ comprises ~~the steps~~acts of:

minimizing a distance between the feature points and the surface elements; and

minimizing an internal energy of the first and second partial deformable surface models.

6. (Original) Method according to claim 5, wherein the internal energy comprises an extended internal energy relating to a difference of a length of the additional edge and a distance between the first and second partial deformable models.

7. (Currently amended) Image processing device, comprising:

a memory for storing a deformable surface model comprising a first deformable surface model and a second deformable surface model and for storing an image depicting a first object and a second object; and

an image processor for adapting the deformable surface model to a first surface of the first object and a second surface of the second object, which processor ~~performs~~ is configured to perform the following operation:

(a) applying the first partial deformable surface model describing a structure of the first surface of the first object;

(b) applying the second partial deformable surface model describing a structure of the second surface of the second object, wherein the first partial deformable surface model and the second partial deformable surface model have a prescribed spatial relationship corresponding to ~~a spatial relationship~~ distances between portions of the first object and portions of the second object; and

(c) adapting the first partial deformable model to the first surface and the second partial deformable model to the second surface, wherein the prescribed spatial relationship of the first partial deformable surface model and the second partial deformable surface model is used for the adaptation.

8. (Currently amended) Computer program stored on a computer readable medium for an image processing device, ~~in accordance with~~

~~claim 6, for adapting the computer program being configured to adapt~~
a deformable surface model comprising a first partial deformable
surface model and a second partial deformable surface model to a
first surface of a first object and a second surface of a second
object, ~~comprising the following steps~~ the computer program
~~comprising programming portions configured to:~~

(a) ~~applying~~ apply the first partial deformable surface model
describing a structure of the first surface of the first object;

(b) ~~applying~~ apply the second partial deformable surface model
describing a structure of the second surface of the second object,
wherein the first partial deformable surface model and the second
partial deformable surface model have a prescribed spatial
relationship corresponding to ~~a spatial relationship~~ distances
between portions of the first object and portions of the second
object; and

(c) ~~adapting~~ adapt the first partial deformable model to the
first surface and the second partial deformable model to the second
surface, wherein the prescribed spatial relationship of the first
partial deformable surface model and the second partial deformable
surface model is used for the adaptation.

9. (New) Method according to claim 4, wherein the portions of the first and second objects correspond to the detected feature points and wherein the distances between the portions of the first object and the portions of the second object correspond to distances between the feature points of the first and second objects.

10. (New) Method according to claim 9, comprising an act of deleting distances that are larger than a threshold, wherein the act of adapting is performed utilizing distances that are not deleted.

11. (New) Computer program according to claim 8, wherein the portions of the first and second objects correspond to the detected feature points and wherein the distances between the portions of the first object and the portions of the second object correspond to distances between the feature points of the first and second objects.

12. (New) Computer program according to claim 11, comprising a programming portion configured to delete distances that are larger

than a threshold, wherein the portion configured to adapt is configured to adapt the first partial deformable model to the first surface and the second partial deformable model to the second surface utilizing distances that are not deleted.

13. (New) Computer program according to claim 8, wherein the first and second partial deformable surface models each comprise a mesh with a plurality of surface elements, the computer program comprising programming portions configured to:

detect feature points for the surface elements at the first and second surfaces of the first and second objects; and

recalculate coordinates of the surface elements of the mesh to represent the feature points.

14. (New) Computer program according to claim 13, wherein the surface elements correspond to triangles.

15. (New) Computer program according to claim 14, wherein the distances between portions of the first object and portions of the second object represent distances between vertices of triangles at the first and second surfaces of the first and second objects.

16. (New) Computer program according to claim 13, wherein the portion configured to recalculate comprises programming portions configured to:

minimize a distance between the feature points and the surface elements; and

minimize an internal energy of the first and second partial deformable surface models.

17. (New) Computer program according to claim 16, wherein the internal energy comprises an extended internal energy relating to a difference of a length of the additional edge and a distance between the first and second partial deformable models.

18. (New) Computer program according to claim 8, the computer program comprising a programming portion configured to calculate the distances by searching for a shortest distance between vertices of the triangles at the first and second surfaces of the first and second objects.